

Allam Property Group

M

507 Raymond Terrace Rd and 173 McFarlanes Road, Chisholm

LGA: Maitland

Aboriginal Heritage Due Diligence Assessment

19 March 2021


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| Report No: J202137DD | |
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| Position: | Director |
| Signed: |  |
| Date: | 19 March 2021 |

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EXECUTIVE SUMMARY

McCardle Cultural Heritage Pty Ltd (MCH) has been engaged by Allam Property Group to undertake an Archaeological Due Diligence Assessment for the proposed residential subdivision of land located at 507 Raymond Terrace Road and 173 McFarlanes Road, Chisolm.

The project area is situated in the central lowlands area on the Permian Maitland Group (Mulbring Siltstone group) geological formation consisting of siltstone, sandstone and conglomerate and within the Beresfield Soil Landscape. Consisting of an A horizon that overlies the B horizon, Unit A and Unit B are interpreted as being Holocene and Pleistocene in age respectively and within the region, sites tend to occur on or within soil Horizon A or are often present at the interface of the A and B horizons. The project area is located approximately 2.1 Kilometres south west of the Hunter River, 1.6 kilometres east of Four Mile Creek and 1.3 kilometres south west of Saltwater Gulley. There are five 1st order drainage depression surrounding the project area that flow into 2nd order creeks the closest of which is approximately 90 metres north of the project area and another approximately 655 metres south east of the project area. Not having a fresh water supply, the project area would not have supported camping but may have been utilised for more transitory activities such as hunting and gathering and travel to the more reliable fresh water supplies of the Hunter River. In terms of land uses and impacts, the investigation area has been subject to grazing and agricultural activities, fencing and tracks. At 507 Raymond Terrace Road, a house and sheds are located towards the southern end with a large dam through the centre which as completely altered the original 1st order drainage line that as present. At 173 McFarlanes Road, the house and shed are located towards the northern end of the property and two dams through the centre and another dam towards the southern areas. These direct impacts to the land and associated cultural materials that may be present are easy to see and understand.

A search of the AHIMS register indicate there are 113 known Aboriginal sites recorded within two kilometres of the project area and include 96 artefact sites, 14 artefact and PAD sites and 3 PADs. There are no registered sites or Aboriginal Places within the project area. Research of the regional and local archaeological record has highlighted the following past Aboriginal land use patterns:

- a wide variety of site types are represented in the project area with open campsites and isolated artefacts by far the most common
- lithic artefacts are primarily manufactured from silcrete and mudstone with a variety of other raw materials also utilised but in smaller proportions
- sites in proximity to ephemeral water sources or located in the vicinity of headwaters of upper tributaries (1st order streams) have a sparse distribution and density and contain little more than a background scatter
- sites located in the vicinity of the upper reaches of minor tributaries (2nd order streams) also have a relatively sparse distribution and density and may represent evidence of localised one-off behaviour
- sites located in the vicinity of the lower reaches of tributaries (3rd order creeks) have an increased distribution and density and contain evidence that may represent repeated occupation or concentration of activity
- sites located in the vicinity of major tributaries (4th and 5th order streams/rivers) have the highest distribution and densities. These sites tend to be extensive and complex in landscapes with permanent and reliable water and contain evidence representative of concentrated activity

- sites located within close vicinity at the confluence of any order stream may be a focus of activity and may contain a relatively higher artefact distribution and density

Based on the environmental and archaeological contexts it was predicted that there was very limited potential for artefact scatters to be located within the project area due to the distance from reliable fresh water and associated subsistence and medicinal resources. Isolated finds were also found to be a common site type in the locality and the broader region and it was predicted that there was potential for isolated artefacts to occur across the project area and across all landforms. It was also noted that there was the potential for such sites to be impacted on through past land uses.

The survey results confirmed the past land uses, landforms and archaeological predictive modelling. 507 Raymond Terrace Road consisted of gentle to moderate slopes, a crest was located along the northern boundary (that continued into the adjoining property) and one drainage depression through the centre. Previously cleared, eroded ridges and furrows were present indicating ploughing, grazing had occurred throughout and an established large house with numerous sheds were located towards the southern section of the property. A large dam had been constructed towards the northern half of the property and had completely altered the drainage depression with none of the original depression remaining. Vegetation was predominantly grass with relatively new growth open woodlands through the centre and trees spread throughout. Exposures were moderate to high and included dam construction and landform alteration (drainage depression), tracks, previous clearing, ploughing and house, sheds and garden constructions along with significant erosion along the slopes.

173 McFarlanes Road, included gentle to moderate slopes throughout, the crest along the northern border of the adjoining property continued north into this property and two drainage depressions were also present, one in the southern half and the other roughly in the centre of the property. There was evidence of eroded ridges and furrows indicating ploughing, grazing had occurred throughout and an established large house with sheds located towards the northern section of the property. A large dam had also been constructed towards the southern half of the property which had completely altered the drainage depression with none of the original depression remaining and two smaller dams (of moderate size) located approximately at the centre of the property, again, significantly impacting on the drainage line. The drainage depressions were surrounded by moderate slopes and unsuitable for camping. Vegetation was mainly grass with trees scattered throughout the property and a small dense area of trees located in the southern portion of the project area. Exposures were also moderate to high and included multiple dam construction and landform alteration (drainage depressions), tracks, previous clearing, ploughing and house, sheds and garden constructions along with significant erosion along the slopes. The total effective coverage for the project area was 57,440,400m², or 18.65% reflecting the fair surface visibility.

No archaeological sites or Potential Archaeological Deposits (PADs) were identified during the survey and this is likely due to a number of factors including:

- Distance from reliable water and subsistence resources indicates the project area was unlikely to have been utilised for camping;
- The project area may have been used for travel and/or hunting and gathering which manifest in the archaeological record as very low-density artefact scatters and/or isolated finds; and
- Past and present land uses would have displaced and/or destroyed any evidence of past Aboriginal land use.

As no sites or PADs were identified, there are no impacts on the archaeological record and the following recommendations are provided:

- 1) The persons responsible for the management of onsite works will ensure that all staff, contractors and others involved in construction and maintenance related activities are made aware of the statutory legislation protecting sites and places of significance. Of particular importance is the National Parks and Wildlife Amendment (Aboriginal Objects and Aboriginal Places) Regulation 2010, under the National Parks and Wildlife Act 1974; and
- 2) Should any Aboriginal objects be uncovered during works, all work will cease in that location immediately and the Environmental Line contacted.

GLOSSARY

Aboriginal Place: are locations that have been recognised by the Minister for Climate Change and the Environment (and gazetted under the *National Parks and Wildlife Act 1974*) as having special cultural significance to the Aboriginal community. An Aboriginal Place may or may not include archaeological materials.

Aboriginal Site: an Aboriginal site is the location of one or more Aboriginal archaeological objects, including flaked stone artefacts, midden shell, grinding grooves, archaeological deposits, scarred trees etc.

Artefact: any object that is physically modified by humans.

Artefact scatter: a collection of artefacts scattered across the surface of the ground (also referred to as open camp sites).

Assemblage: a collection of artefacts associated by a particular place or time, assumed generated by a single group of people, and can comprise different artefact types.

Backed artefact: a stone tool where the margin of a flake is retouched at a steep angle and that margin is opposite a sharp edge.

Background scatter: a term used to describe low density scatter of isolated finds that are distributed across the landscape without any obvious focal point.

Core: a chunk of stone from which flakes are removed and will have one or more negative flake scars but no positive flake scars. The core itself can be shaped into a tool or used as a source of flakes to be formed into tools.

Debitage: small pieces of stone debris that break off during the manufacturing of stone tools. These are usually considered waste and are the by-product of production (also referred to as flake piece).

Flake: any piece of stone struck off a core and has a number of characteristics including ring cracks showing where the hammer hit the core and a bulb of percussion. May be used as a tool with no further working, may be retouched or serve as a platform for further reduction.

Flaked piece/waste flake: an unmodified and unused flake, usually the by-product of tool manufacture or core preparation (also referred to asdebitage).

Harm: is defined as an act that may destroy, deface or damage an Aboriginal object or place. In relation to an object, this means the movement or removal of an object from the land in which it has been situated

In situ: archaeological items are said to be "in situ" when they are found in the location where they were last deposited.

Retouched flake: a flake that has been flaked again in a manner that modified the edge for the purpose of resharpening that edge.

Typology: the systematic organization of artefacts into types on the basis of shared attributes.

ACRONYMS

| | |
|--------------|---|
| ACHA | Aboriginal Cultural Heritage Assessment |
| ACHMP | Aboriginal Cultural Heritage Management Plan |
| AHIMS | Aboriginal Heritage Information Management System |
| AHIP | Aboriginal Heritage Impact Permit |

AHIMS SITE ACRONYMS

| | |
|------------|---|
| ACD | Aboriginal ceremonial and dreaming |
| AFT | Artefact (stone, bone, shell, glass, ceramic and metal) |
| ARG | Aboriginal resource and gathering |
| ART | Art (pigment or engraving) |
| BOM | Non-human bone and organic material |
| BUR | Burial |
| CFT | Conflict site |
| CMR | Ceremonial ring (stone or earth) |
| ETM | Earth mound |
| FSH | Fish trap |
| GDG | Grinding groove |
| HAB | Habitation structure |
| HTH | Hearth |
| OCQ | Ochre quarry |
| PAD | Potential archaeological deposit. |
| SHL | Shell |
| STA | Stone arrangement |
| STQ | Stone quarry |
| TRE | Modified tree (carved or scarred) |
| WTR | Water hole |

1 INTRODUCTION

1.1 INTRODUCTION

McCardle Cultural Heritage Pty Ltd (MCH) has been engaged by Allam Property Group to undertake an Archaeological Due Diligence Assessment for the proposed residential subdivision of land located at 507 Raymond Terrace Road and 173 McFarlanes Road, Chisholm.

The assessment has been undertaken to meet the Heritage NSW, Department of Premier & Cabinet, Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales (DECCW 2010), the Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW (OEH 2011), the Due Diligence Code of Practice for the Protection of Aboriginal Objects in NSW, Council requirements and the brief.

The purpose of a due diligence assessment is to assist proponents to exercise due diligence when carrying out activities that may harm Aboriginal objects or Aboriginal places and to determine whether they should apply for a consent to harm Aboriginal objects or Places through an Aboriginal Heritage Impact Assessment (AHIP). The purpose of this due diligence report is to demonstrate that all reasonable and practicable measures have been undertaken to prevent harm to any Aboriginal objects and/or place within the project area. This report has met the requirements and considered the relevant environmental and archaeological information, the project land condition, the nature of the proposed development activity and impacts, as well as preparing appropriate recommendations.

1.2 THE PROJECT AREA

The project area, located at 507 Raymond Terrace Road and 173 McFarlanes Road, includes Lot 31 DP778111 and Lot 32 DP778111, respectively, and the location of the project area is shown in Figures 1.1 to 1.3.

Figure 1.1 Regional location of the project area

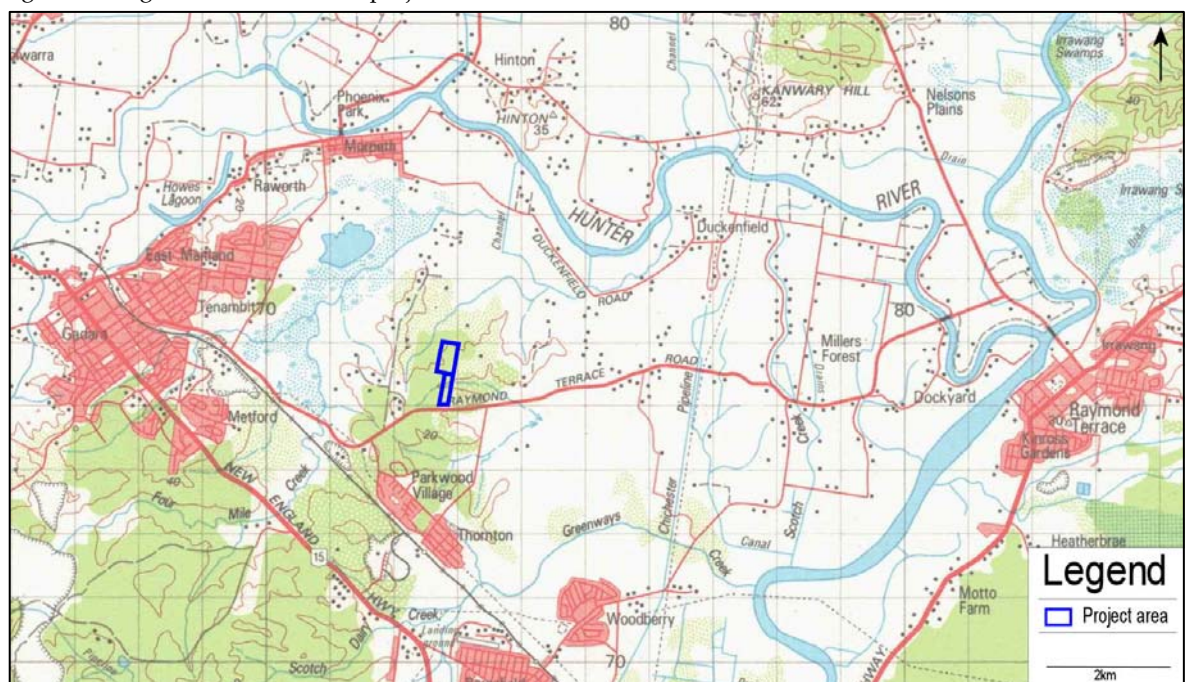


Figure 1.2 Local location of the project area

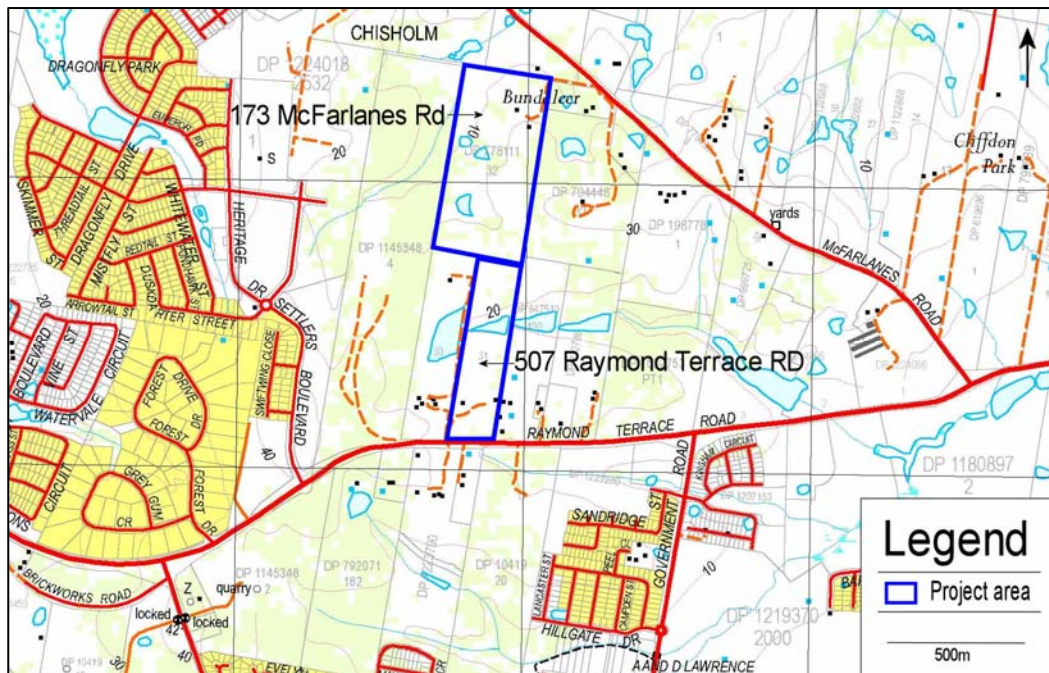


Figure 1.3 Aerial photograph of the project area (nearmap January 2021)



1.3 DESCRIPTION OF THE PROPOSED DEVELOPMENT

The proposal includes the subdivision of the project area into Torrens title residential lots. This would include the demolition and removal of existing structures, extensive excavation works, construction of roads, landscaping and associated infrastructure. Any development or impacts occurring within the project area will have regard to and be managed in accordance with the requirements and provisions of the National Parks and Wildlife Act 1974.

1.4 OBJECTIVES OF THE DUE DILIGENCE ASSESSMENT

The objectives and primary tasks of this due diligence assessment were to:

- Undertake a search of the Aboriginal Heritage Management System (AHIMS) and other relative registers;
- Undertake preliminary research into the environmental and archaeological contexts of the project area;
- Develop a predictive model of site location for the project area;
- Undertake a field survey of the project area;
- Assess the potential impacts of the proposed development on any identified Aboriginal sites or potential archaeological deposits (PADs) identified within the project area;
- Assess the significance of any identified Aboriginal objects or sites identified within the project area;
- Complete and submit site cards to AHIMS for any Aboriginal sites identified; and
- Provide appropriate recommendations.

1.5 LEGISLATIVE CONTEXT

The following overview of the legislative framework, is provided solely for information purposes for the client, and should not be interpreted as legal advice. MCH will not be liable for any actions taken by any person, body or group as a result of this general overview and MCH recommends that specific legal advice be obtained from a qualified legal practitioner prior to any action being taken as a result of the general summary below.

Land managers are required to consider the effects of their activities or proposed development on the environment under several pieces of legislation. Although there are a number of Acts and regulations protecting Aboriginal heritage, including places, sites and objects, within NSW, the three main ones include:

- National Parks and Wildlife Act (1974, as amended)
- National Parks and Wildlife Regulation (2009)
- Environmental Planning and Assessment Act (1979)

1.5.1 NATIONAL PARKS AND WILDLIFE ACT (1974, AS AMENDED)

The National Parks and Wildlife Act (1974), Amended 2010, is the primary legislation for the protection of Aboriginal cultural heritage in New South Wales. The NPW Act protects Aboriginal

heritage (places, sites and objects) within NSW and the Protection of Aboriginal heritage is outlined in s86 of the Act, as follows:

- “A person must not harm or desecrate an object that the person knows is an Aboriginal object” s86(1)
- “A person must not harm an Aboriginal object” s86(2)
- “A person must not harm or desecrate an Aboriginal place” s86(4)

Penalties apply for harming an Aboriginal object, site or place. The penalty for knowingly harming an Aboriginal object (s86[1]) and/or an Aboriginal place (s86[4]) is up to \$550,000 for an individual and/or imprisonment for 2 years; and in the case of a corporation the penalty is up to \$1.1 million. The penalty for a strict liability offence (s86[2]) is up to \$110,000 for an individual and \$220,000 for a corporation.

Harm under the National Parks and Wildlife Act (1974, as amended) is defined as any act that; destroys defaces or damages the object, moves the object from the land on which it has been situated, causes or permits the object to be harmed. However, it is a defence from prosecution if the proponent can demonstrate that;

- 1) harm was authorised under an Aboriginal Heritage Impact Permit (AHIP) (and the permit was properly followed), or
- 2) the proponent exercised due diligence in respect to Aboriginal heritage.

The ‘due diligence’ defence (s87[2]), states that if a person or company has applied due diligence to determine that no Aboriginal object, site or place was likely to be harmed as a result of the activities proposed for the Project Area, then liability from prosecution under the NPW Act 1974 will be removed or mitigated if it later transpires that an Aboriginal object, site or place was harmed. If any Aboriginal objects are identified during the activity, then works should cease in that area and OEH notified (DECCW 2010:13). The due diligence defence does not allow for continuing harm.

The archaeological due diligence assessment and report has been carried out in compliance with the NSW DECCW 2010 Due Diligence Code of Practice for the Protection of Aboriginal Objects in NSW.

1.5.2 NATIONAL PARKS AND WILDLIFE REGULATION (2009)

The National Parks and Wildlife Regulation 2009 provides a framework for undertaking activities and exercising due diligence in respect to Aboriginal heritage. The Regulation (2009) recognises various due diligence codes of practice, including the Due Diligence Code of Practice for the Protection of Aboriginal Objects in NSW which is pertinent to this report, but it also outlines procedures for Aboriginal Heritage Impact Permit (AHIP) applications and Aboriginal Cultural Heritage Consultation Requirements (ACHCRs); amongst other regulatory processes.

1.5.3 ENVIRONMENTAL PLANNING & ASSESSMENT ACT 1979 (EP&A ACT)

EP&A Act establishes the statutory framework for planning and environmental assessment in NSW and the implementation of the EP&A Act is the responsibility of the Minister for Planning, statutory authorities and local councils. The EP&A Act contains three parts which impose requirements for planning approval:

- Part 3 of the EP&A Act relates to the preparation and making of Environmental Planning Instruments (EPIs), State Environmental Planning Policies (SEPPs) and Local Environmental Plans (LEPs).
- Part 4 of the EP&A Act establishes the framework for assessing development under an EPI. The consent authority for Part 4 development is generally the local council, however the consent authority may be the Minister, the Planning Assessment Commission or a joint regional planning panel depending upon the nature of the development.
- Part 4, Division 4.1 of the EP&A Act establishes the assessment pathway for State significant development (SSD) declared by the State Environmental Planning Policy (State and Regional Development) 2011 (NSW). Once a development is declared as SSD, the Secretary's Environmental Assessment Requirements (SEARs) will be issued outlining what issues must be considered in the EIS.
- Part 5 of the EP&A Act provides for the control of 'activities' that do not require development consent and are undertaken or approved by a determining authority. Development under Part 5 that are likely to significantly affect the environment is required to have an EIS prepared for the proposed activity.
- Part 5.1 of the EP&A Act establishes the assessment pathways for State significant infrastructure (SSI). Development applications made for SSI can only be approved by the Minister. Once a development is declared as SSI, the SEARs will be issued outlining what issues must be addressed in the EIS.

The applicable approval process is determined by reference to the relevant environmental planning instruments and other controls, LEPs and State Environmental Planning Policies (SEPPs). This project falls under Part 4.

1.6 ABORIGINAL COMMUNITY CONSULTATION

A due diligence assessment relates to the physical identification of Aboriginal objects, sites and places. Community consultation is only required once Aboriginal objects, sites or places have been identified and an Aboriginal Heritage Impact Permit (AHIP) is deemed necessary. Section 5.2 of the 2010 Due Diligence Code of Practice for the protection of Aboriginal Objects in NSW specifically states that;

'consultation with the Aboriginal community is not a formal requirement of the due diligence process' (2010:8).

1.7 QUALIFICATIONS OF THE INVESTIGATOR

Penny McCardle: Principal Archaeologist/Forensic Anthropologist has 19 years' experience in Indigenous archaeological assessments, excavation, research, reporting, analysis and consultation and fifteen years Forensic Anthropology experience in skeletal identification, biological profiling and skeletal trauma reconstruction and identification.

- BA (Archaeology and Palaeoanthropology, University of New England 1999
- Hons (Archaeology and Palaeoanthropology): Physical Anthropology), University of New England 2001
- Forensic Anthropology Course, University of New England 2003
- Armed Forces Institute of Pathology Forensic Anthropology Course, Ashburn, VA 2008

- Analysis of Bone trauma and Pseudo-Trauma in Suspected Violent Death Course, Erie College, Pennsylvania, 2009
- Hostile Environment Awareness Training (HEAT), 2018
- Tactical Emergency Casualty Care – Level, 1 2018
- Complete PhD, University of Newcastle, 2018

1.8 REPORT STRUCTURE

The report includes Section 1 which outlines the project, Section 2 presents the environmental and archaeological context, Section 3 provides the results and discussion and Section 4 presents the Impact Assessment, Section 5 discusses the mitigation measures and Section 6 provides the management recommendations.

2 ENVIRONMENTAL AND ARCHAEOLOGICAL CONTEXT

The archaeological due diligence process and assessment requires that the available knowledge and information in relation to the environmental and archaeological contexts is considered. The purpose of this is to assist in identifying whether Aboriginal objects, sites or places are likely to be present within the project area based on archaeological predictive modelling and in what condition they may be found in given the environmental impacts.

2.1 LOCAL ENVIRONMENT

Past site location and land use are closely linked to the environment including the landform, geology, geomorphology, soils, waterways and associated resources. The environmental context is important to identify potential factors relating to past Aboriginal land use patterns.

The project area is situated in the central lowlands area on the Permian Maitland Group (Mulbring Siltstone group) geological formation consisting of siltstone, sandstone and conglomerate (Newcastle Geological Map 1966) and within the Beresfield Soil Landscape. Consisting of a crest through the centre of the project area and slopes, this soil landscape consists of a friable brownish black loam (topsoil - A₁ horizon) that is moderately acid to neutral (pH 5.5 – 7.0). The A₂ horizon underlies this and consists of hard setting dull yellowish brown sandy loam that is moderately to slightly acid (pH 5.0 – 6.0) and overlies reddish brown plastic pedal clays of the B horizon (Matthei 1995: 30 – 33).

The geomorphology of the Hunter Valley is complex and include texture contrast soils that mantle the undulating to hilly landscapes on Permian and Carboniferous rocks and the older alluvial terraces and valley fills. These soils consist of an upper soil Horizon A and underlying B (referred to as duplex soils (Galloway 1963; Hughes 1984). Unit A and Unit B are interpreted as being Holocene and Pleistocene in age respectively. Within the region, sites tend to occur on or within soil Horizon A or are often present at the interface of the A and B horizons. Within the A horizon the lowermost (in terms of vertical positioning) artefact assemblages tend to contain artefacts that are typically attributed to the mid-Holocene, as characterised by an increase in the number of backed artefacts.

The project area is located approximately 2.1 Kilometres south west of the Hunter River, 1.6 kilometres east of Four Mile Creek and 1.3 kilometres south west of Saltwater Gulley. There are five 1st order drainage depression surrounding the project area that flow into 2nd order creeks the closest of which is approximately 90 metres north of the project area and another approximately 655 metres south east of the project area. There are three 1st order drainage depressions in the project area, all associated with moderate slopes. Not having a fresh water supply, the project area would not have supported camping but may have been utilised for more transitory activities such as hunting and gathering and travel to the more reliable fresh water supplies of the Hunter River.

European settlers extensively cleared the original native vegetation in the 1800's and since then the investigation area has been subject to grazing and agricultural activities, fencing and tracks. At 507 Raymond Terrace Road, a house and sheds are located towards the southern end with a large dam through the centre which has completely altered the original 1st order drainage line that is present. At 173 McFarlanes Road, the house and shed are located towards the northern end of the property and two dams through the centre and another dam towards the southern areas. These direct impacts to the land and associated cultural materials that may be present are easy to see and understand.

Early vegetation clearing methods included the uprooting of trees by chaining which would have disturbed or destroyed any cultural materials that may be present near or underneath trees and vegetation. Although pastoralism is a comparatively low impact activity, it does result in disturbances due to vegetation clearance and the trampling and compaction of grazed areas. These

factors accelerate the natural processes of sheet and gully erosion, which in turn can cause the horizontal and lateral displacement of artefacts. Furthermore, grazing by hooved animals can affect the archaeological record due to the displacement and breakage of artefacts resulting from trampling (Yorston et al 1990). Pastoral land uses are also closely linked to alterations in the landscape due to the construction of dams, fence lines and associated structures. As a sub-set of agricultural land use, ploughing typically disturbs the top 10-12 centimetres of topsoil (Koettig 1986) depending on the method and machinery used during the process. Ploughing increases the occurrence of erosion and can also result in the direct horizontal and vertical movement of artefacts, thus causing artificial changes in artefact densities and distributions. In fact, studies undertaken on artefact movement due to ploughing (e.g. Roper 1976; Odell and Cowan 1987) has shown that artefacts move between one centimetre up to 18 metres laterally depending on the equipment used and horizontal movement. Ploughing may also interfere with other features and disrupt soil stratigraphy (Lewarch and O'Brien 1981). Ploughing activities are typically evidenced through 'ridges and furrows' however a lengthy cessation in ploughing activities dictates that these features may no longer be apparent on the surface.

Excavation works required for developments, including but not limited to business, residential, industrial, aviation and associated infrastructure and utilities as well as dam construction, involves excavation, cut and fill methods. These direct impacts to the land and associated cultural materials that may be present are easy to see and understand. Any form of construction or resource exploitation that involves the removal of, relocation of or compaction of soils sediments or minerals, requires the modification of the topography, thus displacing and/or destroying any cultural materials that may have been present (Wood 1982).

Additional disturbances would have derived from natural processes. The patterns of deposition and erosion within a locality can influence the formation and/or destruction of archaeological sites. Within an environment where the rate of erosion is generally high, artefacts deposited in such an environment will be eroded downslope after being abandoned. Additionally, bioturbation processes such as the redistribution and mixing of cultural deposits occurs as a result of burrowing and mounding by earthworms, ants and other species of burrowing animals. Artefacts can move downwards through root holes as well as through sorting and settling due to gravity, and translocation can also occur as a result of tree falls (Balek 2002; Peacock and Fant 2002:92).

The project area is located within an environment that provided limited resources that would have allowed for sustainable occupation of the area. Rather, the project area, being located over one kilometre from any reliable fresh water and associated subsistence and medicinal resources, may have been utilised by past Aboriginal people for hunting and gathering activities as well as travel to the Hunter River and other reliable fresh water sources. In relation to modern alterations to the landscape, the previous large-scale clearing, agricultural and pastoral activities, dam and house construction and tracks throughout the project areas can be expected to have had low to moderate impacts upon the archaeological record as such activities would have displaced any cultural materials that may have been present.

2.2 ARCHAEOLOGICAL CONTEXT

A review of the archaeological literature of the region, and more specifically the local area and the results of an AHIMS search provide essential contextual information for the current assessment.

2.2.1 HERITAGE REGISTER LISTINGS

The National Heritage List, the Commonwealth Heritage List, the Australian Heritage Database, Australia's National Heritage List, The National Trust Heritage Register State Heritage Inventory

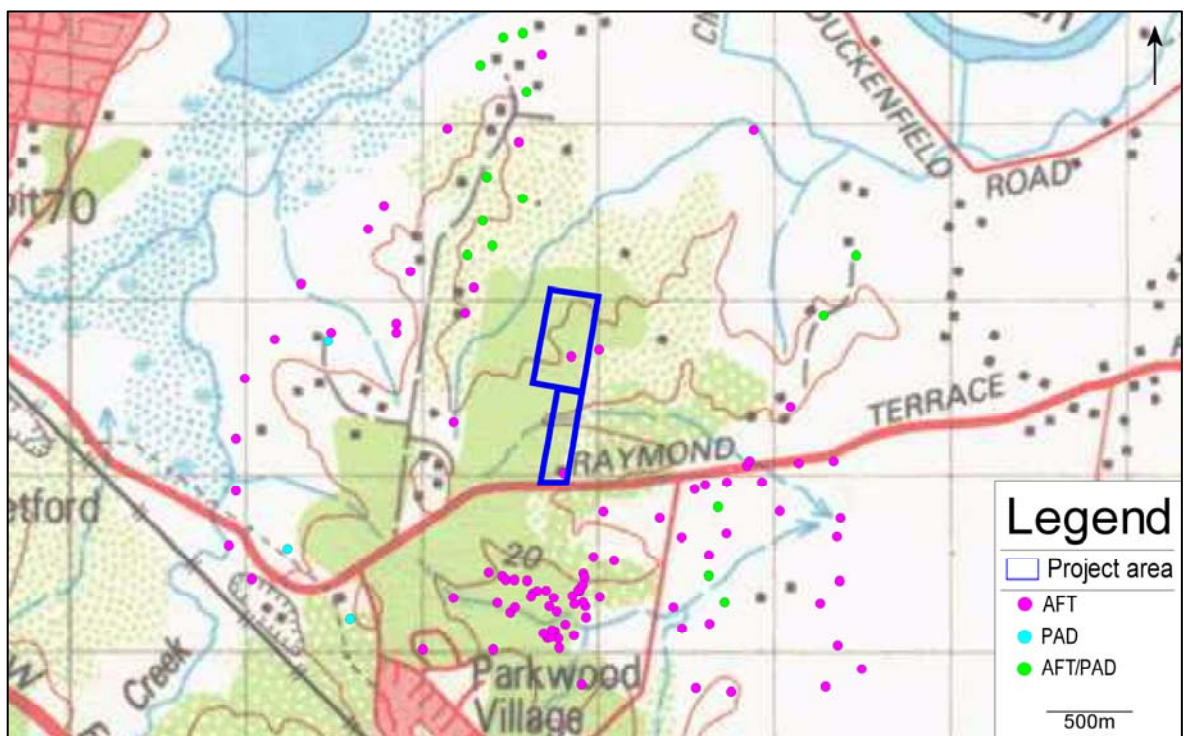
the and the Maitland Local Environmental Plan have no Aboriginal objects, sites or places listed over the project area.

2.2.2 ABORIGINAL HERITAGE INFORMATION MANAGEMENT SYSTEM (AHIMS)

It must be noted that there are many limitations with an AHIMS search including incorrect site coordinates due to errors and changing of computer systems over the years that failed to correctly translate old coordinate systems to new systems. Secondly, AHIMS will only provide up to 110 sites per search, thus limiting the search area surrounding the project area and enabling a more comprehensive analysis and finally, few sites have been updated on the AHIMS register to notify if they have been subject to a s87 or s90 and as such what sites remain in the local area and what sites have been destroyed, to assist in determining the cumulative impacts, is unknown. In addition to this, other limitations include the number of studies in the local area, high levels of erosion have proven to disturb sites, site contents, and the extent of those disturbances is unknown. Thus, the AHIMS search is limited and provides a basis only that aids in predictive modelling.

A search of the AHIMS register (Appendix A) indicate there are 113 known Aboriginal sites recorded within two kilometres of the project area and include 96 artefact sites, 14 artefact and PAD sites and 3 PADs (Figure 2.1). There are no registered sites or Aboriginal Places within the project area.

Figure 2.1 Location of AHIMS sites

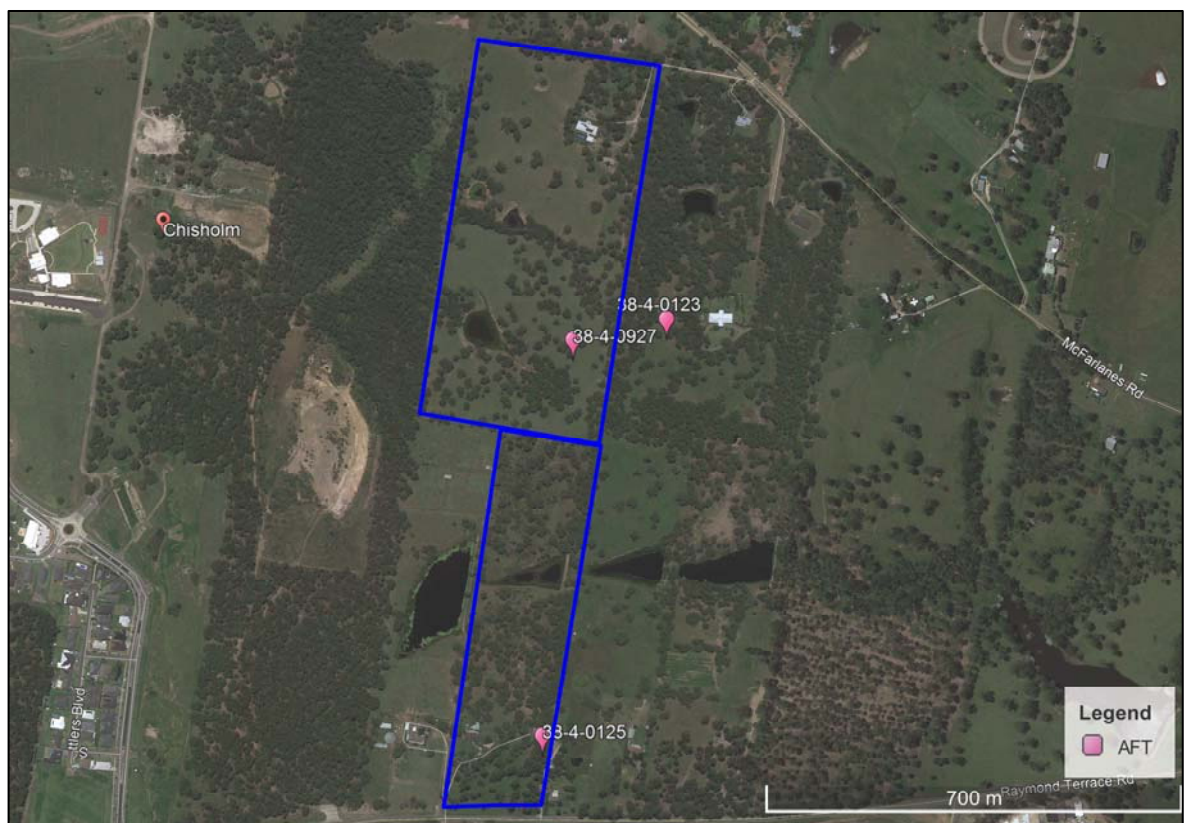


As shown in Figure 2.2, although a site (38-4-0927) appears to be located within the project area, examination of the site card places this site outside the project area. The site, an artefact scatter, was recorded in 2004 and it is well known that coordinates during that time were hundreds of metres out. The site card places the site on the southern side of Raymond Terrace Road in between Raymond Terrace Road and John Arthur Avenue, placing the site well outside the project area. **Site 38-4-0927 is not in the project area.**

Although a site (38-4-0125) appears to be located within the project area, examination of the site card places this site outside the project area. The site, an artefact scatter, was recorded in 1982 and it is well known that coordinates during that time were hundreds of metres out. The site card places the site within 150 metres of a dammed 2nd order creek along a track in a hobby farm. Examination of aerial photographs show that the closest dammed 2nd order creek was located approximately 655 metres south east of the project area (the property also being a hobby farm previously), placing the site well outside the project area. **Site 38-4-0125 is not in the project area.**

Due to the unreliable coordinates of previously identified sites on AHIMS, site 38-4-0123 appears to be outside the project area and this is confirmed as the site card locates this site 300 from a 2nd order on an upper slope in close proximity to a flood plain wetland and within a eucalypt woodland. The closest 2nd order creek is located approximately 90 metres north of the project area and the closest woodland is also outside the project area (north). Another 2nd order creek is located approximately 655 metres south east of the project area, also in association with a woodland. As the project area does not include open woodland in close proximity to the 2nd order creek, the site appears to be located outside the project area. **Site 38-4-0123 is not in the project area.**

Figure 2.2 Location of AHIMS sites in the project area based on AHIMS coordinates



2.2.3 SUMMARY OF THE REGIONAL ARCHAEOLOGICAL CONTEXT

The most relevant investigations from across the regional area indicate differing results and observations based on surface visibility and exposure, alterations to the landscape (including mining, industrial and residential development), proximity to water sources and geomorphology. The following summary is derived from a review of the most relevant investigations (Davidson et al 1993; Dean-Jones and Mitchell 1993; Koettig and Hughes 1984; McDonald 1997; Haglund 1999;

Kuskie 2000; HLA-Envirosciences 2002; AMBS 2002; MCH 2004a, b) and provides a regional archaeological context in terms of site location and distribution.

Based on the available information it is possible to identify a number of trends in site location and patterning within the local area. Open campsites are by far the most common site type with isolated finds also comparatively well represented. A variety of other site types have been identified in far lower concentrations and include grinding grooves, scarred trees, rock shelters, shelters with art and burials. The high representation of sites containing stone artefacts is to be expected due to the durability of stone in comparison to other raw materials. Raw materials used for tool manufacture include mudstone (also called tuff by some) which is the most common lithic artefactual material found in the region, followed by silcrete and in lesser quantities chert, quartz, quartzite, petrified wood, porcellanite, basalt, limestone, sandstone, rhyolite, basalt, European glass and other non-specific lithic types also occur in smaller quantities. The most common stone artefacts include flakes, flake fragments and flaked pieces. Cores, edge ground axes, millstones, grindstones, hammer stones and backed artefacts including backed blades, bondi points, geometric microliths and eloueras also occur though in lower frequencies. In general, the stone artefact assemblage in the area has been relatively dated to what was previously known as the Small Tool Tradition (10,000 years BP). On the basis of stone tool technology, the overwhelming majority of Aboriginal open sites within the region are attributed to the Holocene period. However, at Glennies Creek, north of Singleton, based on radiocarbon dated charcoal and geomorphological evidence it is suggested that artefacts found in the B-horizon may have been deposited between 10,000 and 13,000 BP (Koettig 1986a, 1986b).

Proximity to reliable water was essential for past occupation and the highest percent of sites are identified within 50 metres of a water source. Other landforms such as slopes and crest/ridge formations are also common site locations when in close proximity to reliable water, and when at a distance from water, sites are few and very low density and are typically interpreted as being indicative of travel routes and/or hunting/gathering grounds.

2.2.4 SUMMARY OF THE LOCAL ARCHAEOLOGICAL CONTEXT

All archaeological surveys throughout the local area have been undertaken in relation to environmental assessments for developments. The most relevant investigations indicate differing results and observations based on surface visibility and exposure, alterations to the landscape, proximity to water sources and geomorphology. Previous assessments of the local area (Resource Planning Pty Ltd 1994; ARAS 2003; Kuskie & Clark 2006; Kuskie 2007, 2015; Biosis 2018; MCH 2019) have identified that artefact scatters and isolated finds are the most prominent site type. These assessments have highlighted that;

- a wide variety of site types are represented in the project area with open campsites and isolated artefacts by far the most common
- lithic artefacts are primarily manufactured from silcrete and mudstone with a variety of other raw materials also utilised but in smaller proportions
- sites in proximity to ephemeral water sources or located in the vicinity of headwaters of upper tributaries (1st order streams) have a sparse distribution and density and contain little more than a background scatter
- sites located in the vicinity of the upper reaches of minor tributaries (2nd order streams) also have a relatively sparse distribution and density and may represent evidence of localised one-off behaviour

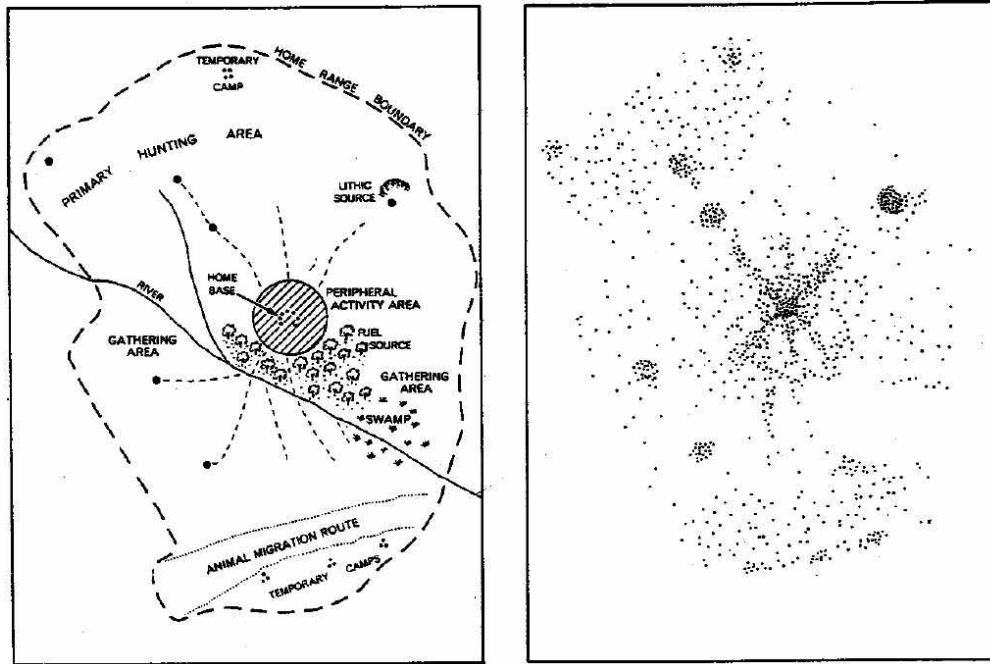
- sites located in the vicinity of the lower reaches of tributaries (3rd order creeks) have an increased distribution and density and contain evidence that may represent repeated occupation or concentration of activity
- sites located in the vicinity of major tributaries (4th and 5th order streams/rivers) have the highest distribution and densities. These sites tend to be extensive and complex in landscapes with permanent and reliable water and contain evidence representative of concentrated activity
- sites located within close vicinity at the confluence of any order stream may be a focus of activity and may contain a relatively higher artefact distribution and density

The previous assessments also noted that all sites had been disturbed through past landuses including but not limited to clearing, agricultural and pastoral activities, residential developments, utilities, infrastructure and erosion. All excavations also identified highly disturbed subsurface deposits due to the above mentioned intensive long-term land uses.

2.3 MODELS OF PAST ABORIGINAL LAND USE

The main aim of this project is to attempt to define both the nature and extent of occupation across the area. As a result, the nature of the analysis will focus on both the landform units and sites. The purpose of this strategy is to highlight any variations between sites and associated assemblages, landforms and resources across the area treating assemblages as a continuous scatter of cultural material across the landscape. In doing this, it is possible to identify variation across the landscape, landforms and assemblages that correspond with variation in the general patterns of landscape use and occupation. Thus, the nature of activities and occupation can be identified through the analysis of stone artefact distributions across a landscape. A general model of forager settlement patterning in the archaeological record has been established by Foley (1981). This model distinguishes the residential 'home base' site with peripheral 'activity locations'. Basically, the home base is the focus of attention and many activities and the activity locations are situated away from the home base and are the focus of specific activities (such as tool manufacturing). This pattern is illustrated in Figure 2.2. Home base sites generally occur in areas with good access to a wide range of resources (reliable water, raw materials etc). The degree of environmental reliability, such as reliable water and subsistence resources, may influence the rate of return to sites and hence the complexity of evidence. Home base sites generally show a greater diversity of artefacts and raw material types (which represent a greater array of activities performed at the site and immediate area). Activity locations occur within the foraging radius of a home base camp (approximately 10 km); (Renfrew and Bahn 1991). Based on the premise that these sites served as a focus of a specific activity, they will show a low diversity in artefacts and are not likely to contain features reflecting a base camp (such as hearths). However, it is also possible that the location of certain activities cannot be predicted or identified, adding to the increased dispersal of cultural material across the landscape. If people were opting to carry stone tools during hunting and gathering journeys throughout the area rather than manufacturing tools at task locations, an increased number of used tools should be recovered from low density and dispersed assemblages.

Figure 2.3 Foley's model (L) and its manifestation in the archaeological record (R), (Foley 1981).



2.3.1 MODEL OF OCCUPATION FOR THE HUNTER VALLEY

Work in the Hunter Valley has aimed to understand the nature of Aboriginal occupation and determine the nature of land use. This theme often aims to identify and explain archaeological patterning in site type, content and distribution. General theories have been developed outlining the relationship between land use patterns and the resulting archaeological evidence. A number of models developed for the Hunter Valley have been reviewed (Koettig 1994; Dean-Jones and Mitchell 1993; Rich 1995; Kuskie and Kamminga 2000) and the most commonly accepted model is summarised below.

Kuskie and Kamminga (2000) established a general model of occupation strategies based primarily upon ethnographic research. Used as a starting point, it makes a general set of predictions for the Hunter that is consistent with other studies (e.g. Nelson 1991). The model distinguishes between short-term or extended long-term occupation and makes some predictions about the likely location of different foraging and settlement activities. Combining this information with a general review of assemblage contents from a sample of excavated sites within the Hunter Valley, a baseline of settlement activities may be determined (Barton 2001).

The model provides a number of archaeological expectations that may be tested. For example, the presence of features requiring a considerable labour investment such as stone-lined ovens or heat-treatment pits are likely to occur at places where occupation occurred for extended periods of time. The presence of grindstones is also a reliable indicator of low mobility and extended occupation. Seed grinding requires a large investment of time and effort (Cane 1989). In most ethnographic examples, seed grinding is an activity that takes place over an entire day to provide adequate energetic returns (Cane 1989; Edwards and O'Connell 1995). Where group mobility was high and campsites frequently shifted throughout the landscape, artefact assemblages are not expected to contain elements such as grindstones, heat-treatment pits, ovens and the diversity of implements frequently discarded at places of extended residential occupation. It may also have been the case that the location of particular activities could not be predicted by tool users, adding to the increased low-density scattering of artefacts over the landscape. Also, if individuals were opting to carry a number

of stone tools during hunting and gathering activities and maintaining these tools rather than manufacturing new tools at each task location, the ratio of used tools to unworn flakes in these assemblages should be high. Table 2.1 has been adapted from Kuskie and Kamminga (2000). To identify the specific activity areas through analysis of the composition of patterning of lithic assemblages, is utilised. However, this is applied to excavated materials as they provide more realistic data due to the lesser degree of disturbances, removal and breakages.

Table 2.1 Site descriptions (Kuskie & Kamminga 2000).

| Occupation Pattern | Activity Location | Proximity to water | Proximity to food | Archaeological expectations |
|--|---|-----------------------------------|---------------------|--|
| Transitory movement | all landscape zones | not important | not important | <ul style="list-style-type: none"> • assemblages of low density & diversity • evidence of tool maintenance & repair • evidence for stone knapping |
| Hunting &/or gathering without camping | all landscape zones | not important | near food resources | <ul style="list-style-type: none"> • assemblages of low density & diversity • evidence of tool maintenance & repair • evidence for stone knapping • high frequency of used tools |
| Camping by small groups | associated with permanent & temporary water | near (within 100m) | near food resources | <ul style="list-style-type: none"> • assemblages of moderate density & diversity • evidence of tool maintenance & repair • evidence for stone knapping & hearths |
| Nuclear family base camp | level or gently undulating ground | near reliable source (within 50m) | near food resources | <ul style="list-style-type: none"> • assemblages of high density & diversity • evidence of tool maintenance & repair & casual knapping • evidence for stone knapping • heat treatment pits, stone lined ovens • grindstones |
| Community base camp | level or gently undulating ground | near reliable source (within 50m) | near food resources | <ul style="list-style-type: none"> • assemblages of high density & diversity • evidence of tool maintenance & repair & casual knapping • evidence for stone knapping • heat treatment pits, stone lined ovens • grindstones & ochre • large area >100sqm with isolated camp sites |

2.4 SYNTHESIS OF ENVIRONMENTAL AND ARCHAEOLOGICAL CONTEXTS

The site types identified throughout the area appear to be either low density/small occupation activities or sites that were associated with more secular activities. The broader landform assessment also suggests that larger sites indicative of larger camping groups may be located on elevated land forms in close proximity to reliable water sources and associated resources compared to locations at distance from such necessary resources where large-scale habitation is not possible, but may have been utilised as activity areas away from the main camp. Based on information gained from previous studies, both regionally and locally, within a three-kilometre radius of our project area, it can be expected that:

- The majority of sites are located within 50 metres of a water source;
- High artefact densities sites appear to be situated within 50 metres of a reliable water source;
- Artefact densities decrease with increased distance from reliable water source;
- Main site types are artefact scatters and isolated finds;
- Mudstone/tuff and silcrete are by far the most common raw material types represented at sites in the region. Quartz and chert are the next most frequently in artefact assemblages

followed by volcanic materials, porphyry and petrified wood. Siltstone, rhyolite and porcellanite are relatively rare;

- flakes, broken flakes and flaked pieces are the most common artefact types recorded; and
- The vast majority of artefactual material in the region was observed on exposures with good to excellent ground surface visibility.

2.5 PREDICTIVE MODEL FOR THE PROJECT AREA

An archaeological predictive model is established to identify areas of archaeological sensitivity so it can be used as a basis for the planning and management of Aboriginal heritage. It involves reviewing existing literature to identify basic site distribution patterns. These patterns are then modified according to the specific environment of the project area to form a predictive model for site location within the specific project area. A sampling strategy is then used to test the model and the results of the survey used to confirm, refute or modify the model.

Land-systems and environmental factors are commonly used factors in predictive modelling based on the assumption that they provide distinctive sets of constraints and opportunities that influenced past Aboriginal land use patterns. As land use patterns may differ between zones (due to different environmental conditions), this may result in the physical manifestation of different spatial distributions and forms of archaeological evidence. The predictive model presented here is based on landform units, previous archaeological assessments conducted within the region, distribution of known sites and site densities and traditional Aboriginal land use patterns. Also taken into consideration are land use impacts (both natural and anthropomorphic) that may have resulted in a disturbed landscape and associated archaeological record. However, these assumptions may only be clarified during survey and the model updated accordingly if needed.

Given that fresh water was necessary for survival and the project area is located 1.6 kilometres from the closest reliable fresh water source, the project area was not suitable for camping. The project area may have been utilised for more transitory activities such as travel and hunting and gathering which is reflected in the archaeological record as very low-density artefacts scatters or isolated artefacts. Brief descriptions of the site types that may occur in the project area are presented below. Brief descriptions of the site types that may occur in the project area are presented below.

- **Artefact scatters**

Also described as open campsites, artefact scatters and open sites, these deposits have been defined at two or more stone artefacts within 50 metres of each other and will include archaeological remains such as stone artefacts and may be found in association with camping where other evidence may be present such as shell, hearths, stone lined fire places and/or heat treatment pits. These sites are usually identified as surface scatters of artefacts in areas where ground surface visibility is increased due to lack of vegetation. Erosion, agricultural activities (such as ploughing, grazing) and access ways can also expose surface campsites. Artefact scatters may represent evidence of;

- Large camp sites, where everyday activities such as habitation, maintenance of stone or wooden tools, manufacturing of such tools, management of raw materials, preparation and consumption of food and storage of tools has occurred;
- Medium/small camp sites, where activities such as minimal tool manufacturing occurred;
- Hunting and/or gathering events;
- Other events spatially separated from a camp site, or
- Transitory movement through the landscape.

Artefact scatters are a common site type in the locality and the broader region. There is very limited potential for artefact scatters to be located within the project area due to the distance from reliable fresh water and associated subsistence and medicinal resources. There is also the potential for such sites to be impacted on through past land uses.

- **Isolated finds**

Isolated artefacts are usually identified in areas where ground surface visibility is increased due to lack of vegetation. Erosion, agricultural activities (such as ploughing) and access ways can also expose surface artefacts. Isolated finds may represent evidence of;

- Hunting and/or gathering events; or
- Transitory movement through the landscape.

Isolated finds are a common site type in the locality and the broader region. There is potential for isolated artefacts to occur across the project area and across all landforms and there is also the potential for such sites to be impacted on through past land uses.

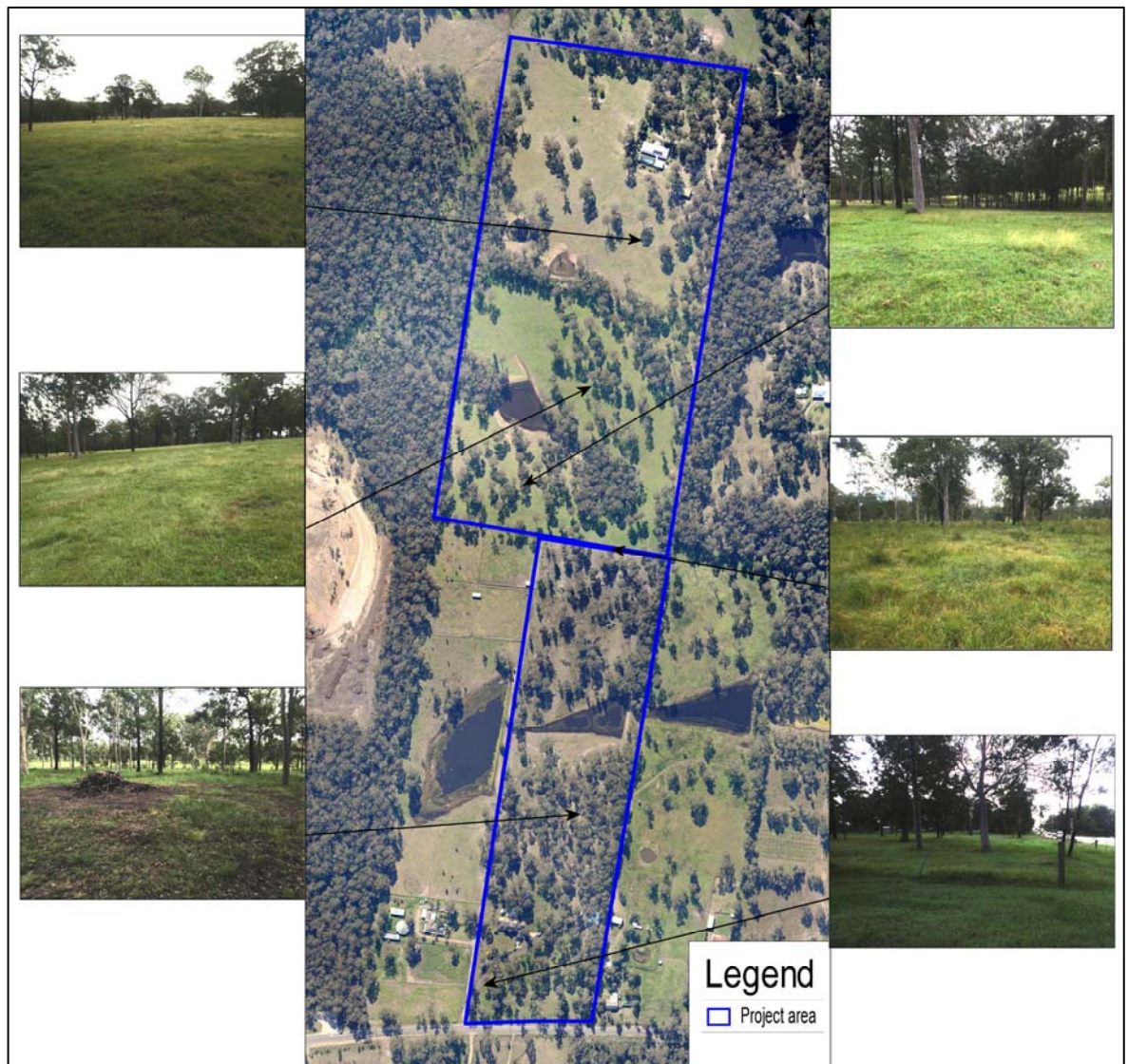
3 RESULTS AND DISCUSSION

To comply with the due diligence requirement that a visual inspection of the project area be undertaken, an archaeological survey across the project area was undertaken by MCH archaeologist on 15th March 2021. The survey focused on areas of high ground surface visibility and exposures (erosional features, dams, tracks, cleared areas).

3.1 SURVEY UNITS

The project area, consisting of two Lots was divided into two major survey units (SU) that were based on Lots and further discussed in three units based on landform elements (following McDonald *et al* 1984) within each property (crest, slopes, drainage depressions). Examples of the project area are provided in Figure 3.1.

Figure 3.1 Examples of the project area



507 Raymond Terrace Road

Consisting of gentle to moderate slopes, a crest was located along the northern boundary (that continued into the adjoining property) and one drainage depression through the centre. Previously cleared, eroded ridges and furrows were present indicating ploughing, grazing had occurred throughout and an established large house with numerous sheds were located towards the southern section of the property. A large dam had been constructed towards the northern half of the property and had completely altered the drainage depression with none of the original depression remaining. Vegetation was predominantly grass with relatively new growth open woodlands through the centre and trees spread throughout. Exposures were moderate to high and included dam construction and landform alteration (drainage depression), tracks, previous clearing, ploughing and house, sheds and garden constructions along with significant erosion along the slopes.

173 McFarlanes Road

Consisting of gentle to moderate slopes throughout, the crest along the northern border of the adjoining property continued north into this property and two drainage depressions were also present, one in the southern half and the other roughly in the centre of the property. There was evidence of eroded ridges and furrows indicating ploughing, grazing had occurred throughout and an established large house with sheds located towards the northern section of the property. A large dam had also been constructed towards the southern half of the property which had completely altered the drainage depression with none of the original depression remaining and two smaller dams (of moderate size) located approximately at the centre of the property, again, significantly impacting on the drainage line. The drainage depressions were surrounded by moderate slopes and unsuitable for camping. Vegetation was mainly grass with trees scattered throughout the property and a small dense area of trees located in the southern portion of the project area. Exposures were also moderate to high and included multiple dam construction and landform alteration (drainage depressions), tracks, previous clearing, ploughing and house, sheds and garden constructions along with significant erosion along the slopes.

As shown in Table 3.1 the total effective coverage for the project area was 57,440,400m², or 18.65% reflecting the fair surface visibility.

Table 3.1 Effective coverage for the investigation area

| SU | Landform | Area (m2) | Vis. % | Exp. % | Exposure type | Previous disturbances | Present disturbances | Limiting visibility factors | Effective coverage (m2) |
|-----------------------------|------------------------|----------------|--------|--------|-----------------------|--|----------------------|-----------------------------|-------------------------|
| 507 | slope, crest, drainage | 102,000 | 30% | 80% | erosion, tracks, dams | clearing, ploughing, grazing, excavation for structures and dams | erosion, residential | grass, leaf litter | 24,480 |
| 173 | slope, crest, drainage | 206,000 | 20% | 80% | erosion, tracks, dams | clearing, ploughing, grazing, excavation for structures and dams | erosion, residential | grass, leaf litter | 32,960 |
| Totals | | 308,000 | | | | | | | 57,440 |
| Effective coverage % | | | | | | | | | 18.65% |

The level and nature of the effective survey coverage is considered satisfactory to provide an effective assessment of the project area. The coverage was comprehensive for obtrusive site types (e.g. grinding grooves and scarred trees) but somewhat limited for the less obtrusive surface stone artefact sites by surface visibility constraints that included vegetation cover and minimal exposures.

3.2 ARCHAEOLOGICAL SITES AND PADS

No archaeological sites or Potential Archaeological Deposits (PADs) were identified during the survey and this is likely due to a number of factors including:

- Distance from reliable water and subsistence resources indicates the project area was unlikely to have been utilised for camping;
- The project area may have been used for travel and/or hunting and gathering which manifest in the archaeological record as very low-density artefact scatters and/or isolated finds; and
- Past and present land uses would have displaced and/or destroyed any evidence of past Aboriginal land use.

In view of the predictive modelling and the results obtained from the effective coverage, it is concluded that the survey provides a valid basis for determining the probable impacts of the proposal and formulating recommendations for the project. The survey results demonstrate the absence of Aboriginal objects within the project area. The results are consistent with those obtained from other studies in the local area. The results indicate a number of possible past Aboriginal land use within the project area;

- Limited or no Aboriginal occupation
- Ground disturbances having disturbed or removed evidence

Considering general models of occupation for the locality, the results of this and local investigations, the locality may have been utilised by Aboriginal people. As the project area itself is located over one-kilometre metres from reliable water and associated resources, the project area is unlikely to have been utilised more than a low intensity usage such as transitory movement or hunting/gathering activities.

3.3 CONCLUSION

It is well established that proximity to water was an important factor in past occupation of the area, with sites reducing in number significantly away from water with most sites located within 50 metres of the tributaries. In terms of fresh water availability and the associated subsistence and medicinal sources, all of which are necessary for survival are absent from the project area. The closest fresh water source and associated subsistence and medicinal sources is Saltwater Gulley located 1.3 kilometres to the east and the Hunter River, 2.1 kilometres to the north east. Thus, whilst the project area would have been unsuitable for camping by large numbers of people, it may have been utilised by small transitory groups of people (i.e. hunting) and this activity manifests in the archaeological record as a background scatter of discarded artefacts across the landscape.

In relation to modern alterations to the landscape, previous large-scale clearing, ploughing, grazing and construction works associated with the houses, sheds and associated utilities and dams can be expected to have had moderate to high impacts upon the archaeological record. Natural factors such as erosion would also have impacted on the archaeological record, all of which would have displaced cultural materials and the likelihood of in situ cultural materials is very low.

4 ASSESSMENT OF IMPACTS

The archaeological record is a non-renewable resource that is affected by many processes and activities. As outlined in Section 2 and Section 3, the various natural processes and human activities have impacted on archaeological deposits through both site formation and taphonomic processes.

4.1 IMPACTS

The Heritage NSW Code of Practice for the Archaeological Investigation of Aboriginal Objects in New South Wales (2010:21) describes impacts to be rated as follows:

- 1) Type of harm: is either direct, indirect or none
- 2) Degree of harm is defined as either total, partial or none
- 3) Consequence of harm is defined as either total loss, partial loss, or no loss of value

As no sites or PADs were identified, there are no impacts on the archaeological record.

5 MITIGATION AND MANAGEMENT STRATEGIES

Specific strategies, as outlined through the Heritage NSW, Department of Premier & Cabinet Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales (DECCW 2010b), the Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW (OEH 2011), and the Due Diligence Code of Practice for the Protection of Aboriginal Objects in NSW (DECCW 2010c), are considered below for the management of the identified site within the project area.

5.1 CONSERVATION/PROTECTION

Conservation is the first avenue and is suitable for all sites, especially those considered high archaeological significance and/or cultural significance. Conservation includes the processes of looking after an indigenous site or place so as to retain its significance and are managed in a way that is consistent with the nature of peoples' attachment to them.

As no sites or PADs were identified conservation/protection is not required.

5.2 FURTHER INVESTIGATION

An Aboriginal Heritage Impact Permit (AHIP) is no longer required to undertake test excavations (providing the excavations are in accordance with the Code of Practice for Archaeological Investigations in NSW). Subsurface testing is appropriate when a PAD has been identified, and it can be demonstrated that sub-surface Aboriginal objects with potential conservation value have a high probability of being present, and that the area cannot be substantially avoided by the proposed activity.

As no sites or PADs were identified further investigations are not justified.

5.3 AHIP

If harm will occur to an Aboriginal object or Place, then an AHIP is required from Heritage NSW. If a systematic excavation of the known site could provide benefits and information for the Aboriginal community and/or archaeological study of past Aboriginal occupation, a salvage program may be an appropriate strategy to enable the salvage of cultural objects. The AHIP may also include surface collection of artefacts.

As no sites or PADs were identified an AHIP is not required.

6 RECOMMENDATIONS

6.1 GENERAL

- 1) The persons responsible for the management of onsite works will ensure that all staff, contractors and others involved in construction and maintenance related activities are made aware of the statutory legislation protecting sites and places of significance. Of particular importance is the National Parks and Wildlife Amendment (Aboriginal Objects and Aboriginal Places) Regulation 2010, under the National Parks and Wildlife Act 1974; and
- 2) Should any Aboriginal objects be uncovered during works, all work will cease in that location immediately and the Environmental Line contacted.

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APPENDIX A

AHIMS Search Results

